*****THIS SITE WAS DROPPED*****

Trend Study 14-7-99

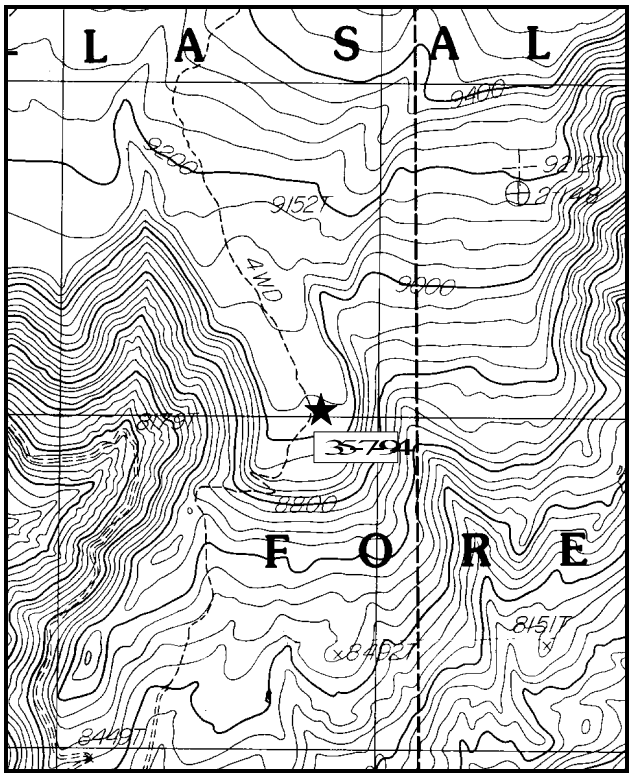
Study site name: Shay Mountain . Range type: Mixed Oak-Sagebrush .

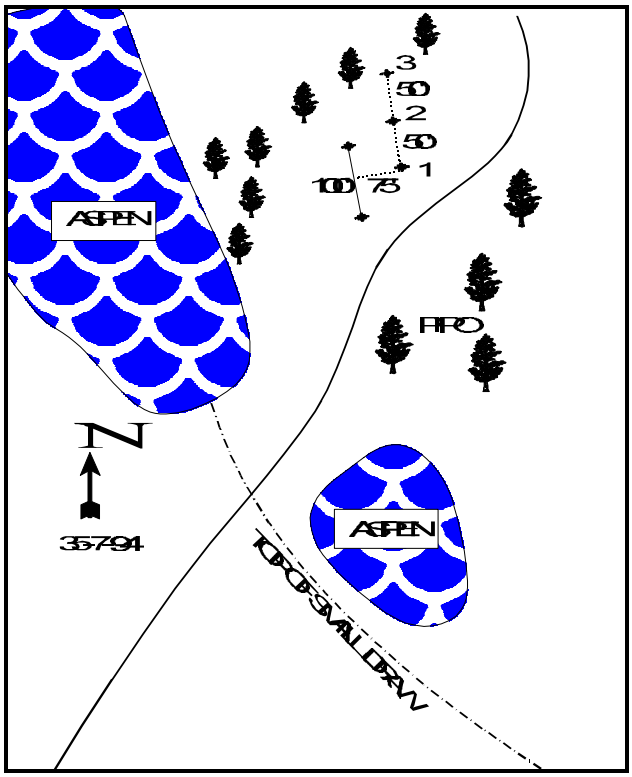
Compass bearing: frequency baseline 349 degrees.

Footmark (first frame placement) 5 feet, footmarks (frequency belts) line 1 (11 & 95ft), line 2 (34ft), line 3 (59ft), line 4 (71ft).

LOCATION DESCRIPTION

On the north side of Foy Lake, turn right Just below the dike. Proceed west on the road towards Shay Mountain for 5.25 miles. At this point, the road forks, with the left fork going toward the "Hop Creek" trail and the right fork towards Shay Mountain. Take the right fork for 0.4 miles to another fork. Turn right and go 1.50 miles (on a rough 4-wheel drive road involving a steep ascent and tight switchbacks) to a faint fork. Turn right and travel on this faint road for 0.25 miles past the edge of a small aspen grove at the head of a drainage to a large ponderosa pine on the right. Stop. The baseline starts 10 feet to the left of the road in the oak-sagebrush. The O-foot end is marked by a short, red painted fence post tagged #7848. Density plot number 1 is located 75 feet east of the 50-foot mark of the baseline. The density plots are set up parallel to the baseline with 50 feet between plots .





Map Name: Shay Mountain Diagrammatic Sketch

Township 33S , Range 21E , Section 12

DISCUSSION

Trend Study No. 14-7 (35-7)

This study was dropped in 1999. Text from the 1994 Utah Big Game Range Trend Studies Report has been retained below. Refer to the above mentioned report for maps and data tables.

Located near the top of Shay Mountain, this study samples deer summer range on the north of the Abajo Mountains. It is good summer habitat, with scattered large Ponderosa pine and a dense shrub understory. Gambel oak, mountain big sagebrush, and snowberry form thick patches of low shrub cover. Nearby areas support large groves of aspen. Besides being deer summer range, this mountain could also receive summer use by elk in the future. Cattle are present in the area in the summer. The Shay Ridge unit of the Harts Draw allotment is managed under a rest rotation grazing system with a season of use from mid-June to mid-October. Cattle were being taken off the mountain on the day the study was established in September 1986.

Shay Mountain itself is a very rugged, rather inaccessible 9,989 foot mountain on the north end of the Abajo mountain range. A very rocky and extremely rough road leads up the south side above Indian Creek, on the north side it drops off to the winter range on lower Shay Mesa. The area is open to oil and gas leasing and there are mineral claims and uranium exploration. However, no current mining activity is going on and human pressure is low. Use is probably confined to cattlemen, agency personnel, and a few hunters. There are several springs and water developments on the mountain. Because of the remoteness of the area, there were sightings of several deer and sign of coyote and bear.

The study samples an area classified as a conifer type (Ponderosa pine with mountain brush understory), oakbrush, and mixed oak-sagebrush. Elevation at the site is 8,800 feet. The slope is approximately 10%, with a southwestern aspect. The area receives an estimated 20 inches of precipitation annually, in the form of snow and summer rain. Snow depth probably precludes use of the study area for 3-4 months each winter.

The soil is a fine dark red-brown loam with 10-20% course fragments over lighter sandy clay loam. It is 10-20 inches in depth. The vegetative and litter cover contribute to soil building and protect it from erosion. There is evidence of water erosion on the steeper, exposed slopes.

Gambel oak is the most abundant browse for it makes up 47% of the total browse cover. The sagebrush is comparatively less abundant as it makes up only 22% of the browse cover. Age structure of the oak is dominated by young plants which made up 72% of the population in 1986. Most of the trees, especially on the outer edges, show moderate utilization. Most of the plants in 1986 also showed some insect and hailstorm damage to the leaves, but it is not severe. The oak ranges from two to four feet tall. Oak was mistakenly not sampled in the shrub strips in 1994. Point quarter data taken during that year estimates 25,775 oak stems/acre averaging 2.6" in diameter. Mature mountain big sagebrush plants average 22 inches in height. It is an older population made up of 98% mature and decadent plants. There was good seed production in 1986. In 1994, biotic potential had risen from 0% to 4%. Sagebrush vigor has improved, for only 12% show poor vigor now. Percent decadency has decreased from 75% down to 46%. In 1986, 55% of the plants showed heavy use, now only 1% show this kind of use. In 1986, the heaviest use was on the relatively uncommon bitterbrush, this too has decreased to just 1% of the plants now heavily used. This prostate growth form numbers 460 plants/acre, with most having a clubbed, but vigorous appearance. Snowberry contributes 22% of the browse cover with only light use.

Grasses are not prominent, but fairly common contributing only 12% of the total vegetative cover. Small and palatable species such as muttongrass, sedge, and Junegrass are most common. Forbs are more common for they make up 22% of the total vegetative cover. The most common forbs are wooly groundsel, yarrow, American vetch, fewflower peavine, balsam root, and dusty penstemon which provides valuable summer forage. More than 30 forb species were encountered on the transects in 1994.

1986 APPARENT TREND ASSESSMENT

There are some rather obvious trends apparent on the mixed oakbrush-sagebrush type. The oak appears to be increasing in size and numbers to the detriment of the mountain big sagebrush. Overuse is causing some decadence and poor vigor problems in the sagebrush population. Overall use of the area appears to have increased since 1981. This oak-sagebrush type is relatively uncommon on the mountain and because of its shrub productivity, it may receive proportionally more use. These factors indicate a downward vegetative trend in terms of deer summer range. The various browse plants are all important and utilized, although forbs are certainly an important component of the summer diet and these herbaceous species appear to be doing fine. Management options are limited, but should strive to avoid overgrazing or over browsing. The percent bare ground estimated was 9%. Cover from shrubs is adequate in most places, however more bare ground is associated with the herbaceous plants. There is evidence of erosion and exposure of rocks on areas lacking litter and/or vegetative cover.

1994 TREND ASSESSMENT

The trend for soil is stable to slightly improving for there has been only a slight decrease in litter cover, but not more than would be expected with the extended drought since 1985. Percent bare ground has decreased to only 3%. Trend for browse is not as critical as it would be if this were a critical winter range, but trend for this area would be considered stable. Even with the slight decline in sagebrush density (which is more likely due of the larger sample size), vigor has improved, percent decadency has decreased from 75% down to 46%, and biotic potential has increased from 0% to 4%. Most other "key" browse species have shown similar improvement since 1986. Trend for the herbaceous understory is down, for nested frequency values for both grasses and forbs have decreased substantially since 1986. This downward trend is most likely the result of the prolonged drought.

TREND ASSESSMENT
soil - stable to slightly improving
browse - stable
herbaceous understory - down